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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,370	07/15/2003	J. Andrew Galloway	PU2164	1369
23454	7590	03/10/2005	EXAMINER	
CALLAWAY GOLF COMPANY 2180 RUTHERFORD ROAD CARLSBAD, CA 92008-7328			PASSANITI, SEBASTIANO	
			ART UNIT	PAPER NUMBER
			3711	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/604,370	Applicant(s) GALLOWAY ET AL. <span style="float: right;">ED</span>	
	Examiner Sebastiano Passaniti	Art Unit 3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on see detailed Office action.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/15/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This Office action is responsive to communication received 07/15/2003 – application papers filed and IDS.

This application is a CONTINUATION of 10/249,054, filed 03/12/2003, now U.S. Patent No. 6,620,056, which is a CONTINUATION of 09/683,906, filed 02/28/2002, now U.S. Patent No. 6,582,321, which is a CONTINUATION of 09/431,982, filed 11/01/1999, now U. S. Patent No. 6,354,962.

Claims 1-8 are pending.

Following is an action on the MERITS:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werner ('150) in view of Peterson ('133), Rugge ('160) and Chou ('081). Werner discloses a hollow metal wood type head having a face plate comprising a central circular region of greatest thickness with at least first, second, third and fourth concentric regions surrounding the central region and including a gradual reduction thickness of the face from the center region to the periphery of the face. Werner differs from the claimed invention in that Werner does not give any particulars with respect to the claimed COR, mass of the head, volume of the head, face area and aspect ratio. Peterson shows it to be old in the art to provide a face portion having a heel-to-toe width

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of 3.5 inches and a height of about 2.4 inches to yield an aspect ratio of 1.46 (col. 5, lines 8-12). Peterson also shows a club head volume of between about 250 and 300 cubic centimeters (col. 5, lines 13, 14). Further, Peterson notes that the dimensions of the head may vary depending upon the construction of the head as a regular-sized, mid-sized or over-sized design (col. 5, lines 14-16). In view of the patent to Peterson, it would have been obvious to modify the device in the Werner Patent by incorporating an aspect ratio less than 1.7 and to suitably size the face area, the motivation being to accommodate the golfer's preference for the size of the head selected. To have further modified the Werner device to include a coefficient of restitution (COR) of between 0.80 and 0.93 in order that the club head complies with USGA regulations relating to face characteristics would have been obvious in view of the patent to Chou, which shows it to be old in the art to control the mechanical response of the hitting surface when striking a ball so that the COR, set by Chou as 0.83, does not violate the maximum launch velocity set forth by the USGA (col. 2, line 66 through col. 6, line 50). Still further, Rugge shows it to be old in the art to provide a hollow metallic wood type club head with a mass of between 165 and 330 grams, as these weights are commonplace in the market (see TABLE I). Rugge explains that a combination of club head volume and weight provides the ingredients for altering the location of the center of gravity and affecting a desirable change in the moment of inertia of the head to help prevent twisting during an off-center shot. In view of the patent to Rugge, it would have been obvious to provide the Werner device with a weight between 165 and 330 grams, the

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motivation being to maximize the moment of inertia without overweighting the club head.

Claims 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson ('133) in view of Chou ('081) and Rugge ('160). The patent to Peterson differs from the claimed invention in that Peterson does not explicitly show the depth of the head, surface area of the face, COR and mass of the head. Note, Peterson does show a face portion having a heel-to-toe width of 3.5 inches and a height of about 2.4 inches to yield an aspect ratio of 1.46 (col. 5, lines 8-12). Peterson also shows a club head volume of between about 250 and 300 cubic centimeters (col. 5, lines 13, 14), thereby meeting the limitations of claims 3 and 5. Further, Peterson notes that the dimensions of the head may vary depending upon the construction of the head as a regular-sized, mid-sized or over-sized design (col. 5, lines 14-16). In view of the comments by Peterson, it would have been obvious to modify the device in Peterson by suitably sizing the face area as required by claims 3 and 6 and the depth of the head as indicated in claim 4 in a manner that does not conflict with the aspect ratio already disclosed by Peterson, the motivation being to accommodate the golfer's preference for the size of the head selected. Note, these claimed dimensions are clearly result-effective. In other words, the weight of the head, the material make-up of the head, the desired location for the center of gravity in addition to the desired mass moment of inertia and COR all have an effect on one another. Where parameters are optimized as would appear to be the case here, such optimization is considered to be obvious to the skilled artisan. See In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Aller, 220 F.2d 454, 105

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USPQ 233 (CCPA 1955). Of further interest is the fact that Peterson shows a crown thickness of about 0.04 inch, which meets the claimed limitations of claim 8. As for the claimed club head weight required by claims 3 and 7, Rugge shows it to be old in the art to provide a hollow metallic wood type club head with a mass of between 165 and 330 grams, as these weights are commonplace in the market (see TABLE I). Rugge explains that a combination of club head volume and weight provides the ingredients for altering the location of the center of gravity and affecting a desirable change in the moment of inertia of the head to help prevent twisting during an off-center shot. In view of the patent to Rugge, it would have been obvious to provide the Peterson device with a weight between 165 and 330 grams, the motivation being to maximize the moment of inertia without overweighting the club head. To have further modified the Peterson device to include a coefficient of restitution (COR) of between 0.80 and 0.93 in order that the club head complies with USGA regulations relating to face characteristics would have been obvious in view of the patent to Chou, which shows it to be old in the art to control the mechanical response of the hitting surface when striking a ball so that the COR, set by Chou as 0.83, does not violate the maximum launch velocity set forth by the USGA (col. 2, line 66 through col. 6, line 50).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note dimension  $D_c$  in Ota. Hasebe shows a depth of 66 mm and an aspect ratio of 1.45.

Applicant is respectfully requested to review the patented claims of U.S. Patent No. 6,620,056, U.S. Patent No. 6,582,321 and U.S. Patent No. 6,354,962 and to




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maintain a clear line of demarcation between the instant claims and the patented claims in each Patent listed here, this in an effort to avoid the need to possibly raise a question of obviousness-type double patenting in any future action on the merits.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sebastiano Passaniti whose telephone number is 571-272-4413. The examiner can normally be reached on Mon-Fri (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 571-272-4415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sebastiano Passaniti  
Primary Examiner  
Art Unit 3711

S.Passaniti/sp  
March 7, 2005